Commodity Highlight

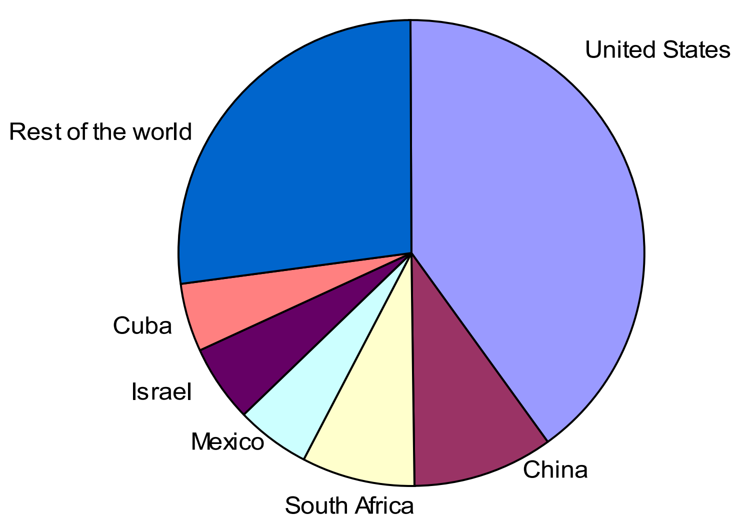
U.S. Leads World in Grapefruit Production

The United States is the world's leading grapefruit producer, accounting for about 40 percent of the world total. According to the United Nation's Food and Agriculture Organization (FAO), China ranks number two, however, China produces mostly the pummelo, which since it is similar to the grapefruit, is grouped together in FAO's data. South Africa, Mexico, Israel, Cuba, and Argentina are the next biggest producers, together accounting for about 25 percent of annual production (fig. 5).

World grapefruit production has been declining over the past 5 years, as U.S. production has been trending downward. Weak U.S. demand for grapefruit and grapefruit products has driven growers to remove acreage either in favor of other agricultural commodities or selling land out of agriculture. While U.S. production has been declining at a rate of almost 6 percent annually since 2000, production has been growing at a rate of 15 percent annually in China and 10 percent annually in South Africa. Growth in China reflects the increased demand of its domestic consumers as incomes are rising. Much of South Africa's increasing production is destined for export markets, with its marketing counter-seasonal to the United States.

The origins of the grapefruit are unknown, however, it is thought to be either a mutation of the pummelo or a cross between a pummelo and an orange. The grapefruit variety popular in the United States was first discovered in Barbados. It was introduced into Florida in the early 1800s. The grapefruit got its name because it grows in a cluster like grapes.

Figure 5
World grapefruit production, 2004



Source: Food and Agriculture Organization, United Nations.

Florida Leads Domestic Production

Florida is the major U.S. grapefruit producer. In a typical season, Florida's production accounts for about 80 percent of the U.S. total. Florida's grapefruit production is concentrated along the mid-eastern coastal counties of Saint Lucie and Indian River, as well as Polk County in central Florida and Hendry County in southwest Florida. With Florida's production averaging 2 million tons a year, it is the world's largest producer of grapefruit.

Texas is the second biggest producer in the United States, although its average crop is only about 12 percent of the size of Florida's. Texas' production is concentrated in the Lower Rio Grande. Its grapefruit production during the seventies and early eighties was about twice the quantity produced in the 2000s before two freezes, one in 1984/85 and another in 1990/91, decimated the industry.

California and Arizona produces the smallest quantity of grapefruit among the major production States. In California, Riverside County accounts for over half of the State's grapefruit bearing acreage. In Arizona, acreage is concentrated in Maricopa/Pinal and Yuma Counties. California and Arizona grapefruit dominate the U.S. market during the spring and summer months when Florida and Texas do not have any supplies, providing for a year round crop and playing an important role in the U.S. grapefruit market.

Bearing Acreage and Production Declining in Recent Years

In response to weak domestic demand for grapefruit since the late nineties, growers have been reducing the number of acres planted to grapefruit trees. While there were almost 200,000 bearing acres in the early eighties, by 2003/04 there were only 114,800 acres. Since 1999/2000, grapefruit bearing acreage has been declining at an average rate of 7 percent annually. Bearing acreage in Florida, which accounts for almost 75 percent of the Nation's total, has been declining at a rate of 8 percent annually, while in Arizona, bearing acreage has been declining at a rate of almost 13 percent annually and in 2003/04, it only had 1,500 acres of bearing grapefruit trees left.

While production has also been trending downward since the early nineties, the decline over the past 5 years has been less rapid than the decline in bearing acreage due to improved planting and management techniques. As a result, production has fallen about 6 percent per year, with output falling more rapidly in Arizona and California than in Florida. Texas production has been relatively stable over the past few years. Texas grapefruit growers have a different situation than growers in the other three States. In the mid-nineties they had increased plantings to replace trees lost during the freezes. These trees would only have begun bearing a sizeable commercial crop during the past few seasons, and growers would be unlikely to remove these newly producing trees.

Grapefruit Marketing Varies by State

Until recently, the major grapefruit-producing States marketed their fruit fairly independently of each other. Florida, the largest producer, had several marketing cooperatives and independent large packinghouses through which they sold most of their fruit. Florida markets its grapefruit from September through June. The fresh-market fruit must meet requirements established under the Federal marketing order established for citrus grown in Florida. The marketing order authorizes grade, size, maturity level, quality, pack, container, and volume regulations. The industry is currently utilizing grade, size, and volume regulations. The utilized volume regulations apply only to red-seedless grapefruit, and are usually established from mid-September to early February. The grade, size, and volume regulations only cover fruit sold outside of Florida.

In recent years, growers have requested that the marketing order regulate the quantity of small, red-seedless grapefruit, up to a certain size, that can enter the market for the first part of the season. By limiting the number of small fruit, the growers see this as a way of bolstering price and at the same time limiting the number of fruit that have not met optimal maturity levels from flooding the market. Some growers in the Florida industry believe that the early fruit is not as sweet as the later fruit and if consumers find the early fruit too tart they will be turned off to grapefruit for the season, thus lowering demand. By limiting what enters the market during the early weeks of the marketing season, most consumers will not begin purchasing the fruit until the sugar/acid ratios are higher and the fruit is sweeter. In turn, there would be more return purchasers. In a typical season, about 40 percent of Florida's grapefruit are sold for fresh-market with the remainder sold to processors.

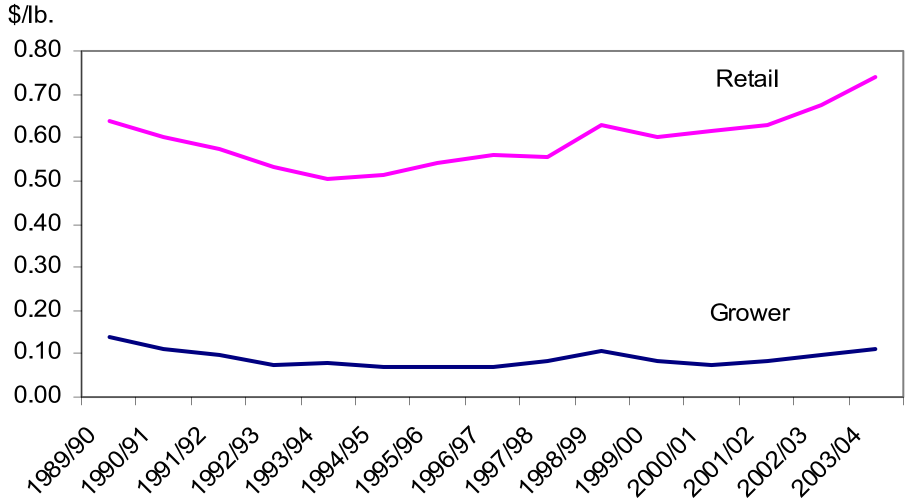
In Texas, grapefruit growers have a separate marketing order from Florida which establishes its own regulations governing grade, size, container, and pack for fruit sold within the United States, Canada, and Mexico. Texas' marketing year runs from October through May. Over the years, Texas' industry has licensed various grapefruit varieties to differentiate its fruit from Florida's which are marketed at the same time. Texas growers have had patents on several red varieties which mutated from pink grapefruit trees in the State. The most popular names are Ruby-Sweet and Red Star. Most of the grapefruit are sold to the fresh market, with only those fruit that do not meet standards sold for processing.

California and Arizona market their grapefruit from November through October and provide the only available grapefruit during the late spring through summer months. California and Arizona do not have marketing orders, but a large portion of their marketing is through Sunkist Growers, a marketing cooperative.

Growers' Share of Retail Price Shrinking

Grapefruit growers receive among the lowest share of the retail price among the major fresh fruit industries. During the 5-year period, 1999/2000-2003/04, grapefruit growers received about 14 percent of the retail dollar (fig. 6). During this time, grower prices averaged 9 cents per pound while the actual retail price (retail price adjusted for spoilage and waste) for fresh grapefruit averaged 56 cents per pound (table 6). While the growers' share of the retail price varies each season, with a low of 11.8 percent in 2000/01 to a high of 21.2 percent in 1989/90, the gap between grower and retail prices over the past two seasons appears to be widening.

Figure 6
Grapefruit grower and retail prices, 1989/90-2003/04



Sources: Bureau of Labor Statistics, U.S. Dept. of Labor, and Economic Research Service, U.S. Dept. of Agriculture.

Table 6--Fresh grapefruit: U.S. monthly average retail price, marketing spread, and grower price, 1989/90-2003/04 1/

		Marketing spread		Grower price	
Year 2/	Retail value 3/	Actual	Portion of retail	Actual	Portion of retail
	Dollars/lb		Percent	Dollars/lb	Percent
1989/90	0.638	0.499	78.2	0.139	21.2
1990/91	0.603	0.491	81.4	0.112	18.0
1991/92	0.571	0.474	83.0	0.097	16.5
1992/93	0.532	0.460	86.4	0.072	13.2
1993/94	0.506	0.426	84.2	0.080	15.3
1994/95	0.514	0.442	86.2	0.071	13.4
1995/96	0.539	0.472	87.5	0.068	12.2
1996/97	0.559	0.488	87.3	0.071	12.3
1997/98	0.557	0.476	85.4	0.081	14.1
1998/99	0.628	0.524	83.4	0.104	16.1
1999/2000	0.600	0.516	85.9	0.084	13.6
2000/01	0.617	0.542	87.9	0.075	11.8
2001/02	0.631	0.550	87.1	0.081	12.5
2002/03	0.673	0.574	85.3	0.099	14.3
2003/04	0.738	0.627	85.0	0.111	14.5

1/ Prices are simple 12-month averages. 2/ Marketing year September of first year through August of the second year shown. 3/ Adjusted to allow for waste and spoilage incurred during marketing.

Sources: Bureau of Labor Statistics, U.S. Department of Labor; National Agricultural Statistics Service and Economic Research Service, USDA.

Processing Market Important to Florida's Industry

Most of the grapefruit grown in Texas, California, and Arizona are sold to the fresh market, with fruit not suitable to be sold fresh going to processing. In Florida, however, about 60 percent of the crop each season goes to processing, mostly for grapefruit juice. Florida growers receive a fraction of the price for their grapefruit sold for processing than if it were sold fresh, however, in most seasons, they receive a positive return on their fruit. California and Arizona growers often sell grapefruit for processing at a loss because it is usually fruit that has already been picked but did not meet fresh-market quality standards.

Grapefruit Consumption Declining, But Prices Drop Faster

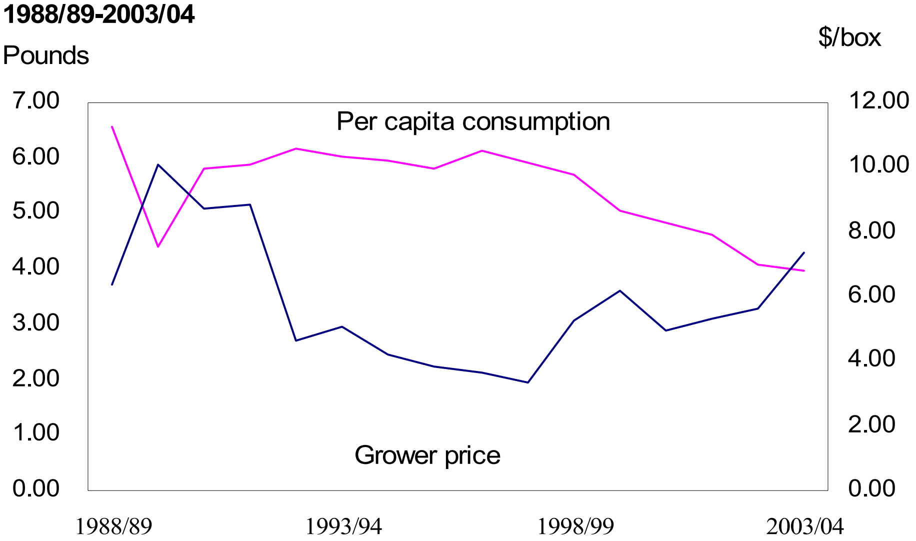
U.S. consumer demand for fresh grapefruit has been declining throughout the 2000s, after remaining relatively steady throughout the nineties (fig. 7). Several factors have contributed to the decline in demand for grapefruit. Among them is the increase in the variety of fruit available during the winter months when most of the fresh grapefruit is marketed. Another is the consumer demand for convenient foods. As of yet, the grapefruit industry has not found an efficient method of providing consumers with fresh grapefruit that they can eat out of hand. Probably the most important factor for the decline in demand for grapefruit, however, is the association between grapefruit and certain medicines. In the nineties, several studies discovered that eating or drinking grapefruit products would intensify the effects of certain medicines. A large group of grapefruit consumers, those in their fifties and older, is also the group most likely to take medications. Because it is not always clear what drugs interact with grapefruit, many older consumers are often cautious about eating grapefruit products while using medications, driving down overall demand.

Although demand for fresh grapefruit has been declining since 1999/2000, prices growers receive for their fresh-market grapefruit fell sharply beginning in 1991/92 and have remained low through 1997/98. A similar pattern occurred in the grapefruit juice market (fig. 8).

The sharp decline in prices beginning in 1991/92 reflected the large supplies of grapefruit available for marketing. Although demand remained stable at this time, growers were producing more grapefruit than demanded. Because of the oversupply of fruit, during several seasons in the nineties, some growers chose not to harvest some of their crop to minimize losses when they realized they would not be able to meet the cost of harvesting and hauling the fruit. The sharp decline in grapefruit juice prices lagged a year behind that of fresh fruit due to low inventories and processors willing to pay high prices despite big supplies to increase juice stocks. Prices rose again in 1999/2000 when fruit for the fresh market had fallen to its lowest levels in the nineties. Since 1999/2000, grapefruit production has

Figure 7

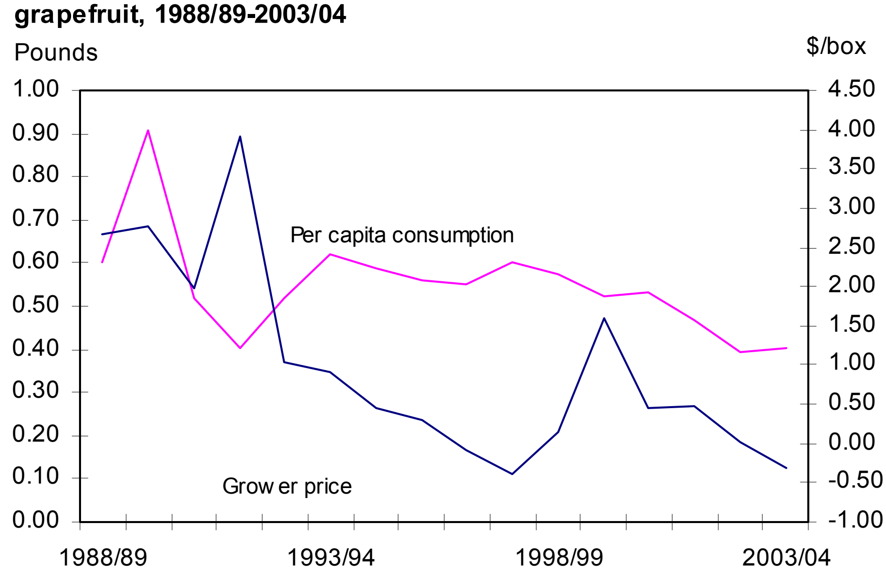
U.S. per capita consumption and grower prices for fresh grapefruit, 1988/89-2003/04



Sources: National Agricultural Statistics Service and Economic Research Service, USDA.

Figure 8

U.S. per capita consumption and grower prices for processed grapefruit, 1988/89-2003/04



Sources: National Agricultural Statistics Service and Economic Research Service, USDA.

declined annually, pushing up prices for fresh grapefruit, but not for processing. While domestic demand for fresh and processing grapefruit has been declining since 2000, export demand for fresh grapefruit has remained steady, increasing overall demand for fresh grapefruit and improving grower prices.

Export Markets Important for U.S. Grapefruit Growers

As U.S. demand for grapefruit and grapefruit products has been trending downward in recent years, the industry has begun to rely more and more on its export markets for sales. In the seventies and early eighties, about one-quarter of U.S. fresh grapefruit were exported. By the late eighties, the share going to exports increased to about 40 percent annually. The top markets for U.S. grapefruit are Japan, the European Union (EU), and Canada. Shipments to Japan account for about half of all exports, the EU accounts for about one-quarter. As the industry has become more reliant on export markets for their products, its revenue has become more tied to changes in the global economy. For example, shipment to Japan and South Korea declined during the Asian economic crisis in the late 1990s, driving down grower revenues to their lowest level in 11 years.

The Hurricanes of 2004 Will Change the Grapefruit Industry for Years to Come

Two of the major hurricanes that hit Florida in the fall of 2004 directly hit the two major east coast grapefruit-production counties in Florida. Both Hurricanes Frances and Jeanne entered Florida at Indian River and St. Lucie Counties. The damage from the hurricanes to grapefruit trees will affect production for years to come. The wind and the rain from the hurricanes reduced the 2004/05 crop drastically. Many growers no longer had any crop to sell. The damage to the trees, however, is much longer lasting. Those trees that did survive will likely produce smaller crops over the next few years as they recover from the stress due to the storms. Many trees were unsalvageable and will need to be replanted. Many growers, however, especially those who have been experiencing financial hardship due to the low prices for grapefruit these past few seasons may opt out of the business, further lowering the quantity of grapefruit available. As the decrease in acreage and production has been the trend since 2000, the result from the hurricanes is likely to quicken the speed of decline. The coastal location of Indian River and St. Lucie are highly desirable locations for development, and some growers may find it to their advantage to sell the land rather than replant to grapefruit.

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